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EXAMINER	
YEN, ERIC L	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/613,631	WANG, KUANSAN	
	Examiner	Art Unit	
	ERIC YEN	2626	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *30 December 2008*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,5-29 and 32-38* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,5-29 and 32-38* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. In response to the Office Action mailed 10/2/08, applicant has submitted an amendment filed 12/30/08.

Arguments for allowability have been presented.

Response to Arguments

1. Applicant's arguments filed 12/30/08 have been fully considered but they are not persuasive.

Applicant argues that Williams does not teach SALT programming being "combined with VoiceXML", because "Williams specifically states that the voice-capable markup language described in the disclosure of Williams 'refers to one of a variety of extensible markup languages'" (Amendment, page 9).

While applicant did accurately quote a definition of "voice-capable markup language" from Williams, this definition does not mean that Williams is limited to only one voice-capable markup language in implementing the IVR. In paragraph 15, Williams teaches that IVR systems can be programmed using VXML "and/or other speech or voice-capable markup languages". The use of and/or is significant because it recognizes the alternative that VXML can be used with other markup languages (or else the passage would have just said "or" since having only one markup language at any time would equate "and" with "or"). Therefore, it is not true that Williams teaches the

use of only one markup language, and therefore teaches SALT programming combined with VoiceXML.

Applicant then argues that Williams clearly fails to teach/suggest SALT tags are embedded within a VoiceXML module or that a SALT module includes an object having a temporal trigger for initializing an operation associated with instructions of a VoiceXML module because Williams "simply discuss that SALT is an example of a markup language in which scripts can be written for testing a system", and that "nowhere does Williams discuss triggers or initializing operations as claimed" (Amendment, page 9, paragraph 2)

As discussed above, it is not true that Williams only teaches SALT as an example of a markup language, and does in fact teach combinations of languages. Williams also teaches "at least one object having a temporal trigger for initializing an operation associated with instructions of the VoiceXML module during the interaction" because, for example, paragraph 5 teaches a dialog interaction with the user (i.e., having the user respond to a sequence of voice queries from the system conducts a dialog). Since a dialog has a sequence of prompts provided to the user, there is a "temporal" relationship between the prompts (voice queries in Williams), and also between the prompts and the user's responses. This is because something tells the system to set off a prompt or a listening operation based on an even that has just happened (e.g., if a user enters a response, the system determines the next thing to say to a user, which is a form of initializing because it prepares the system to output the

next prompt/query). Therefore, the temporal trigger is, under one interpretation, is the system's reaction to something that just happened, because it is based on when that event occurred. Applicant also does not claim that the temporal trigger is a specific elapsed time. It is also generally well known that IVR/dialog/voice-activated systems have a time-out if the user does not respond within a certain amount of time. This prevents systems from holding at a fixed position indefinitely and prompting the user again encourages progress in the dialog. Therefore, it is also obvious to one of ordinary skill in the art to have a trigger based on an elapsed time after a prompt before prompting the user again, because otherwise the system would not do anything or would waste resources waiting for an user's answer that would never arrive.

Finally, applicant argues that Williams does not teach recognition/prompting/messaging/automatically invoking a temporal trigger because Williams discusses a system using a particular voice-capable markup language to generate test scripts (Amendment, page 9)

Although Williams does teach test scripts, it is obvious to one of ordinary skill in the art to use scripts in actual implementation. Williams teaches prompting a user and receiving a response (e.g., paragraph 5), which follows a dialog script. Therefore, Williams at least suggests that the test scripts are used in an actual implementation of the IVR system and not just a test environment. Test environments are used to ensure that the system functions properly so as to not let any errors that arise annoy a user. Therefore, Williams suggests all of the events functions claimed because it is obvious to

user the test scripts once they are acceptable for presentation to a user. The generation of test scripts solely for the purpose of having them without using them during deployment is a useless.

As per Claim 19, Applicant argues that Nakagawa does not teach initializing a SALT module to obtain speech input for filling fields of a VoiceXML module (Amendment, page 10). The interaction between a SALT module and VXML module, however, is taught by Williams, as discussed above. Nakagawa was applied to teach that the dialog implemented involves filling out fields (e.g., the destination of a travel ticket). When a ticket ordering system is implemented by Williams, who teaches using VXML and SALT (the another language), there is a suggested combination of SALT and VXML facilitating the functions of "fill[ing] the first VoiceXML field with a first portion of the speech input and fill[ing]the second VoiceXML field with a second portion of the speech input" as claimed. SALT and VXML can be allocated wherever necessary depending on how the programmer wishes to design the travel ticket system. The portion programmed in SALT and the programmed in VoiceXML can be readily made to interact with each other to fulfill the functions of a ticket ordering system by one of ordinary skill in the art. Therefore, Nakagawa does at least suggest where SALT component that handles the prompting interacts with a VXML form that handles the data in a voice application.

As per Claim 27, Williams teaches "executing instructions and performing an operation embodied in a SALT module upon encountering an object associated with the instructions" because sequential/branching dialog events are taught that define a sequence of events and associated operations necessary to prompt the user and receive speech, where the event is an object and instructions are whatever is necessary to tell the system to prompt the user and gather the voice response. Also, dialog events, speech recognition DTMF recognition, speech prompting and platform messaging are taught in paragraph 5, for example, since the user can responds using telephone keypad presses (DTMF recognition) or speech (speech recognition) in response to a system's voice query (prompt) and the system communicates over networks, using transmission data, between different devices and different components within any given device (platform messaging) to allow all parts of the system to implement the dialog between the system and user.

Therefore, the examiner maintains the previous prior art rejections.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1, 5-7, 13-18, 25-29, 37-38, are rejected under 35 U.S.C. 103(a) as being unpatentable over Williams et al. (US 2003/0212561), hereafter Williams.

As per Claim 1, Williams teaches a computer readable storage medium having instructions that, when implemented on a computer cause the computer to process information ("computer software instructions", paragraph 61)

comprising:

a VoiceXML module executing a form interpretation algorithm ("IVR VXML applications"… paragraph 61; "IVR systems can be programmed… VXML… SALT", paragraph 15; Figure 5; VXML application files… audio prompt", paragraph 63) including instructions executed by the computer in a defined order based on an execution algorithm to cause the computer to establish an interactive dialog with a user ("IVR VXML applications"… paragraph 61; "IVR systems can be programmed… VXML… SALT", paragraph 15; Figure 5; "VXML application files… audio prompt", paragraph 63; "dialogs", paragraph 15) wherein the instructions process dialog events associated with at least one of recognition, prompting, and messaging events ("IVR", paragraph 3; "branching voice queries… caller responds with button pushes… or voice responses", paragraph 5; "call flow", paragraphs 10-11; "call flow", paragraphs 73-76; Figure 5; where an audible response from the user is processed by speech recognition of some form, prompting is generally performed in a call flow, call flow is generally the sequence of prompts used to conduct a dialog, and the "Welcome" prompt shown in Figure 5 is a "messaging event")

a SALT module having speech application language tags embedded within the VoiceXML module, the SALT module including at least one object having a temporal

trigger for initializing an operation associated with the instructions of the VoiceXML module during the interaction, wherein the operation initialized by the SALT module comprises at least one, but not all, of recognition, prompting, and messaging events, (“branching voice queries… caller responds with button pushes… or voice responses”, paragraph 5; where the output of a prompt is a prompting event, and only a prompting event, the "caller response" is a recognition event [i.e., typically IVR systems provide a window for the user to answer]) and wherein the execution algorithm automatically invokes the temporal trigger for initializing the operation when the at least one object is encountered (“IVR VXML applications”… paragraph 61; “IVR systems can be programmed… VXML… SALT”, paragraph 15; Figure 5; “VXML application files… audio prompt”, paragraph 63; "dialogs”, paragraph 15) wherein the instructions process dialog events associated with at least one of recognition, prompting, and messaging events (”IVR”, paragraph 3; “branching voice queries… caller responds with button pushes… or voice responses”, paragraph 5; "call flow", paragraphs 10-11; "call flow", paragraphs 73-76; Figure 5; where, in a call flow [i.e., the sequence of prompts], the output of a particular prompt before another prompt makes a temporal relation between any two prompts, and so the interpretation of the VXML document to decide that one prompt is to be output first/second/etc. after the dialog facilitated by the call flow is initiated [e.g., the system decides to output "welcome" in Figure 5 some amount of time after initiating a dialog corresponding to Figure 5's VXML form).

It would have been obvious to one of ordinary skill in the art at the time of invention to use tested call flow in actual IVR system implementation or otherwise the

tested system serves no practical purpose, so while Williams is specifically directed to the operation of a test system being tested with a virtual user, one of ordinary skill in the art would recognize that the results of the test and the tested system would eventually be used with an actual user to facilitate call flow using the VXML and SALT tags since the IVR system gains its practical use from interacting with actual people, and not just other machines.

As per Claim 5, Williams teaches wherein the temporal trigger initializes a speech recognition event (“branching voice queries… caller responds with button pushes… or voice responses”, paragraph 5; "call flow", paragraphs 10-11; "call flow", paragraphs 73-76; where dialog systems usually involve a window for listening to the user’s response after a particular prompt is played to the user)

As per Claim 6, Williams teaches wherein the temporal trigger initializes a dual-tone multi-frequency (DTMF) recognition event (“branching voice queries… caller responds with button pushes… or voice responses”, paragraph 5; "call flow", paragraphs 10-11; "call flow", paragraphs 73-76).

As per Claim 7, Williams teaches wherein the temporal trigger initializes a messaging event (Figure 5; “VXML application files… audio prompt”, paragraph 63; "dialogs”, paragraph 15; where the Welcome prompt is a general message to the user).

As per Claim 13, Williams teaches wherein the SALT module executes a messaging event to connect to a remote application (Figure 3).

As per Claim 14, Williams teaches wherein the SALT module receives the result based on the messaging event and renders the result to a user (“display", paragraph 39)

As per Claim 15, Williams teaches wherein the execution algorithm automatically advances to a subsequent instruction after completion of the operation ("dialogs”, paragraph 15).

As per Claim 16, Williams teaches wherein the trigger is one of an indication of error, exception, recognition, and no recognition ("dialogs”, paragraph 15; “incorrect or unintelligible”, paragraph 54)

As per Claim 17, Williams teaches wherein the trigger is completion of a playback instruction (“dialogs”, paragraph 15; Figure 5; where stopping after a welcome message doesn’t make sense in an IVR system so a prompt for information following completion of the welcome is obvious).

As per Claim 18, Williams teaches wherein the trigger is receipt of a message ("branching voice queries… caller responds with button pushes… or voice responses", paragraph 5; "call flow", paragraphs 10-11).

As per Claims 25-26 and 37-38, their limitations are similar to those in Claims 13-14, and so are rejected under similar rationale.

As per Claim 27-29, their limitations are similar to those in Claim 1, and 5-7, and so are rejected under similar rationale.

4. Claims 8-10, 12, 19, 21-22, 24, 32-34, and 36are rejected under 35 U.S.C. 103(a) as being unpatentable over Williams, as applied to Claim 1, above, and further in view of Nakagawa et al. (US 7,424,429), hereafter Nakagawa.

As per Claim 8, Williams fails to teach wherein the VoiceXML module declares a first field and a second field and wherein the SALT module initializes a recognition event to obtain speech input from a user and fills the first field with a first portion of the speech input and fills the second field with a second portion of the speech input.

Nakagawa teaches wherein the VoiceXML module declares a first field and a second field and wherein the SALT module initializes a recognition event to obtain speech input from a user and fills the first field with a first portion of the speech input

and fills the second field with a second portion of the speech input (“from Tokyo to Osaka”, col. 5, lines 35-56; “grammars", col. 6, lines 51-63; Figures 9A-9B; Figure 5).

Therefore, it would have been obvious to one of ordinary skill in the art to modify Williams to include the teaching of Nakagawa of wherein the VoiceXML module declares a first field and a second field and wherein the SALT module initializes a recognition event to obtain speech input from a user and fills the first field with a first portion of the speech input and fills the second field with a second portion of the speech input, in order to improve the system's interface with the user, as described by Nakagawa (col. 1, lines 39-55).

As per Claim 9, Williams fails to teach wherein a first grammar is associated with the first field and a second grammar is associated with the second field.

Nakagawa teaches wherein a first grammar is associated with the first field and a second grammar is associated with the second field (“from Tokyo to Osaka”, col. 5, lines 35-56; “grammars", col. 6, lines 51-63; Figures 9A-9B; Figure 5).

Therefore, it would have been obvious to one of ordinary skill in the art to modify Williams to include the teaching of Nakagawa of wherein a first grammar is associated with the first field and a second grammar is associated with the second field, in order to improve the system's interface with the user, as described by Nakagawa (col. 1, lines 39-55).

As per Claim 10, Williams fails to teach wherein the SALT module initializes a recognition event having a plurality of grammars to obtain a recognition result and associates the recognition result with at least one of the plurality of grammars.

Nakagawa teaches wherein the SALT module initializes a recognition event having a plurality of grammars to obtain a recognition result and associates the recognition result with at least one of the plurality of grammars (“from Tokyo to Osaka”, col. 5, lines 35-56; “grammars", col. 6, lines 51-63; Figures 9A-9B; Figure 5).

Therefore, it would have been obvious to one of ordinary skill in the art to modify Williams to include the teaching of Nakagawa of wherein the SALT module initializes a recognition event having a plurality of grammars to obtain a recognition result and associates the recognition result with at least one of the plurality of grammars, in order to improve the system's interface with the user, as described by Nakagawa (col. 1, lines 39-55).

As per Claim 12, Williams fails to teach wherein the VoiceXML module declares a field and wherein the SALT module initializes a recognition event to obtain a recognition result from the user to fill the field and executes a prompt to render the field to the user.

Nakagawa teaches wherein the VoiceXML module declares a field and wherein the SALT module initializes a recognition event to obtain a recognition result from the user to fill the field and executes a prompt to render the field to the user (“from Tokyo to Osaka”, col. 5, lines 35-56; “grammars", col. 6, lines 51-63; Figures 9A-9B; Figure 5).

Therefore, it would have been obvious to one of ordinary skill in the art to modify Williams to include the teaching of Nakagawa of wherein the VoiceXML module declares a field and wherein the SALT module initializes a recognition event to obtain a recognition result from the user to fill the field and executes a prompt to render the field to the user, in order to improve the system's interface with the user, as described by Nakagawa (col. 1, lines 39-55).

As per Claim 19, its limitations are similar to those in Claims 1 and 8, and so is rejected under similar rationale.

As per Claims 21-22, 24, 32-34, and 36, their limitations are similar to those in Claims 8-10, and 12, and so are rejected under similar rationale.

5. Claims 11, 23 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Williams, as applied to Claim 1, and further in view of Nakagawa and Gorin et al. (US 7,003,459), hereafter Gorin.

As per Claim 11, Williams fails to teach wherein the VoiceXML module declares a first field and a second field and wherein the Salt module initializes a recognition event to obtain an input from a user and associates one portion of the input with the first field and another portion of the input with the second field.

Nakagawa teaches wherein the VoiceXML module declares a first field and a second field and wherein the Salt module initializes a recognition event to obtain an input from a user and associates one portion of the input with the first field and another portion of the input with the second field (“from Tokyo to Osaka”, col. 5, lines 35-56; “grammars", col. 6, lines 51-63; Figures 9A-9B; Figure 5).

Therefore, it would have been obvious to one of ordinary skill in the art to modify Williams to include the teaching of Nakagawa of wherein the VoiceXML module declares a first field and a second field and wherein the Salt module initializes a recognition event to obtain an input from a user and associates one portion of the input with the first field and another portion of the input with the second field, in order to improve the system's interface with the user, as described by Nakagawa (col. 1, lines 39-55).

Williams, in view of Nakagawa, fail to teach where the first portion is a speech input and the second portion is a DTMF input.

Gorin teaches where the first portion is a speech input and the second portion is a DTMF input (“DTMF... in combination with the user's communication", col. 6, lines 15-26).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify Williams, in view of Nakagawa, to include the teaching of Gorin of where the first portion is a speech input and the second portion is a DTMF input, in order to increase flexibility of input, as described by Gorin (col. 6, lines 15-26).

As per Claim 23 and 35, their limitations are similar to those in Claim 11, and so are rejected under similar rationale.

6. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Williams, in view of Nakagawa, as applied to Claim 19, and further in view of Aust et al. (US 5,860,059), hereafter Aust.

As per Claim 20, Williams, in view of Nakagawa fail to teach wherein the form interpretation algorithm continuously loops through the voiceXML executable instructions until the first and second VoiceXML fields have been filled.

Aust teaches wherein the form interpretation algorithm continuously loops through the voiceXML executable instructions until the first and second VoiceXML fields have been filled ("from where", col. 3, line 26 - col. 4, line 31).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify Williams, in view of Nakagawa, to include the teaching of Aust of wherein the form interpretation algorithm continuously loops through the voiceXML executable instructions until the first and second VoiceXML fields have been filled, in order to ensure that all necessary information is obtained, as described by Aust (col. 3, line 26 - col. 4, line 31).

Conclusion

2. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ERIC YEN whose telephone number is (571)272-4249. The examiner can normally be reached on M-F 7:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Edouard can be reached on 571-272-7603. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

EY 4/3/09

/Richemond Dorvil/
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